

# **A comparison of COVID-19 epidemiological indicators in Sweden, Norway, Denmark, and Finland**

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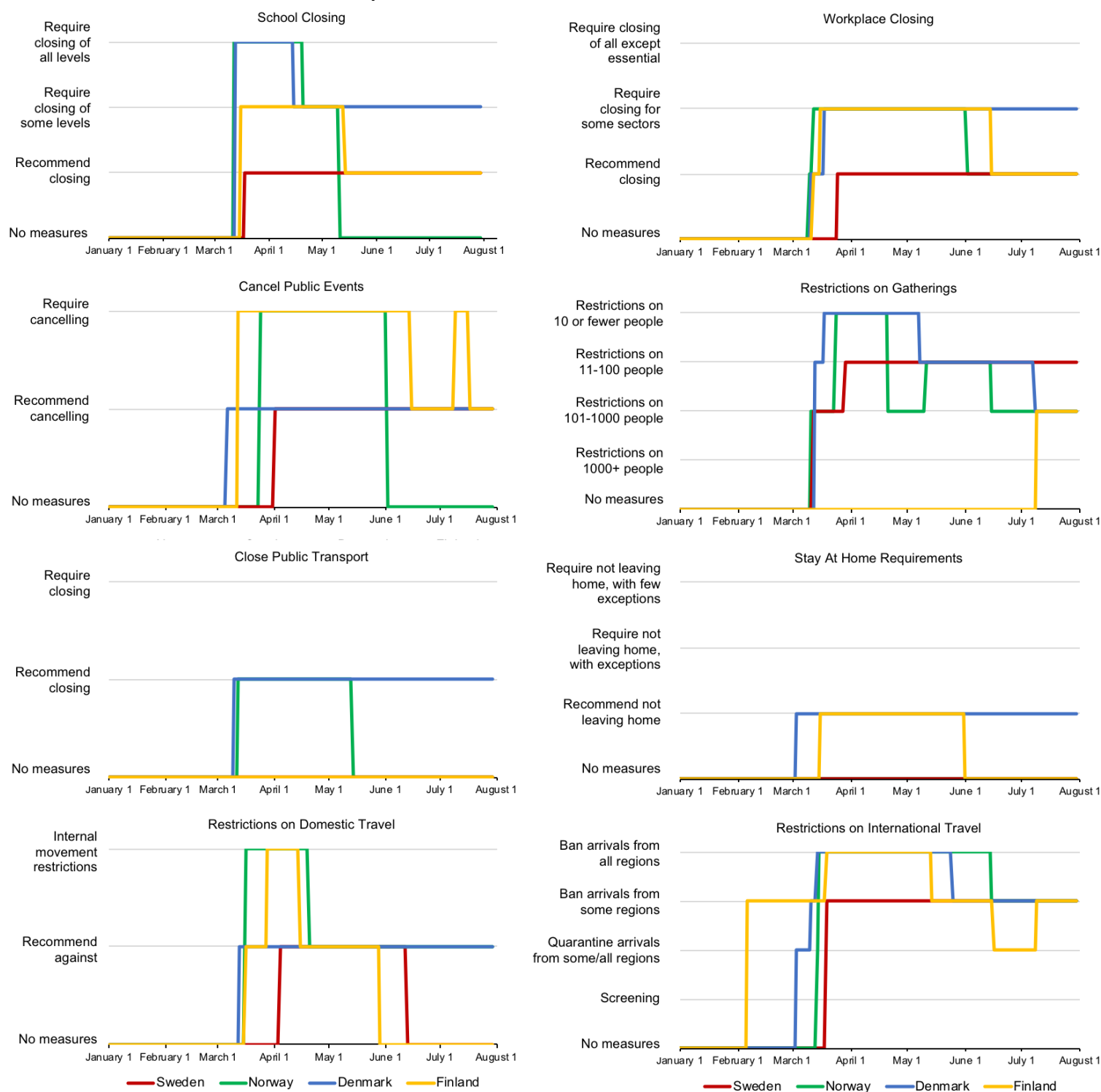
SUPPLEMENTAL MATERIAL

**Supplementary Table 1: Detailed Data References**

| <b>Data</b>                       | <b>Reference</b>   |
|-----------------------------------|--|
| <b>Cumulative cases</b>           |  |
| Sweden                            | Statista. Cumulative number of coronavirus (COVID-19) cases in Sweden since February 2020, <a href="https://www.statista.com/statistics/1102203/cumulative-coronavirus-cases-in-sweden/">https://www.statista.com/statistics/1102203/cumulative-coronavirus-cases-in-sweden/</a> . (accessed 31 July 2020)   |
| Norway                            | Statista. Cumulative number of coronavirus cases in Norway since February 2020, <a href="https://www.statista.com/statistics/1102249/cumulative-coronavirus-cases-in-norway/">https://www.statista.com/statistics/1102249/cumulative-coronavirus-cases-in-norway/</a> (accessed 31 July 2020).   |
| Denmark                           | Statista. Cumulative number of coronavirus (COVID-19) cases in Denmark since February 2020, <a href="https://www.statista.com/statistics/1102241/cumulative-coronavirus-cases-in-denmark/">https://www.statista.com/statistics/1102241/cumulative-coronavirus-cases-in-denmark/</a> (accessed 31 July 2020).   |
| Finland                           | Statista. Cumulative number of coronavirus (COVID-19) cases in Finland since January 2020, <a href="https://www.statista.com/statistics/1102255/cumulative-coronavirus-cases-in-finland/">https://www.statista.com/statistics/1102255/cumulative-coronavirus-cases-in-finland/</a> (accessed 31 July 2020).  |
| <b>Cumulative tests</b>           |  |
| All countries                     | Our World in Data. Total COVID-19 tests per 1,000 people, <a href="https://ourworldindata.org/grapher/full-list-cumulative-total-tests-per-thousand">https://ourworldindata.org/grapher/full-list-cumulative-total-tests-per-thousand</a> (accessed 31 July 2020).   |
| <b>Cumulative deaths</b>          |  |
| Sweden                            | Statista. Cumulative number of coronavirus (COVID-19) deaths in Sweden since March 11, 2020, <a href="https://www.statista.com/statistics/1105753/cumulative-coronavirus-deaths-in-sweden/">https://www.statista.com/statistics/1105753/cumulative-coronavirus-deaths-in-sweden/</a> (accessed 31 July 2020).  |
| Norway                            | Statista. Cumulative number of coronavirus (COVID-19) deaths in Norway since March 12, 2020, <a href="https://www.statista.com/statistics/1105635/cumulative-coronavirus-deaths-in-norway/">https://www.statista.com/statistics/1105635/cumulative-coronavirus-deaths-in-norway/</a> (accessed 31 July 2020).  |
| Denmark                           | Statista. Cumulative number of coronavirus (COVID-19) deaths in Denmark since March 11, 2020, <a href="https://www.statista.com/statistics/1106692/cumulative-coronavirus-deaths-in-denmark/">https://www.statista.com/statistics/1106692/cumulative-coronavirus-deaths-in-denmark/</a> (accessed 31 July 2020).   |
| Finland                           | Statista. Cumulative number of coronavirus (COVID-19) deaths in Finland since March 20, 2020, <a href="https://www.statista.com/statistics/1107435/cumulative-coronavirus-deaths-in-finland/">https://www.statista.com/statistics/1107435/cumulative-coronavirus-deaths-in-finland/</a> (accessed 31 July 2020).   |
| <b>All-cause mortality</b>        |  |
| Sweden                            | Statistics Sweden. Population statistics - Preliminary statistics on deaths (updated 2020-07-03), <a href="https://www.scb.se/en/finding-statistics/statistics-by-subject-area/population/population-composition/population-statistics/">https://www.scb.se/en/finding-statistics/statistics-by-subject-area/population/population-composition/population-statistics/</a> (accessed 31 July 2020). |
| Norway                            | Statbank Norway. Deaths, by sex, age and week. Preliminary figures 2000 - 2020, <a href="https://www.ssb.no/en/statbank/table/07995/">https://www.ssb.no/en/statbank/table/07995/</a> (accessed 31 July 2020).   |
| Denmark                           | Statistics Denmark. Deaths per week (experimental statistics) by region, sex and age, <a href="https://www.statbank.dk/dodc2">https://www.statbank.dk/dodc2</a> (accessed 31 July 2020).   |
| Finland                           | Statistics Finland. Deaths by Area, Week, Age, Sex and Information, <a href="https://pxnet2.stat.fi/PXWeb/pxweb/en/Kokeelliset_tilastot/Kokeelliset_tilastot__vamu_koke/statfin_vamu_pxt_12ng.px">https://pxnet2.stat.fi/PXWeb/pxweb/en/Kokeelliset_tilastot/Kokeelliset_tilastot__vamu_koke/statfin_vamu_pxt_12ng.px</a> (accessed 31 July 2020).   |
| <b>Age distribution of cases</b>  |  |
| Sweden                            | Statista. Number of coronavirus (COVID-19) cases in Sweden in 2020, by age groups, <a href="https://www.statista.com/statistics/1107905/number-of-coronavirus-cases-in-sweden-by-age-groups/">https://www.statista.com/statistics/1107905/number-of-coronavirus-cases-in-sweden-by-age-groups/</a> (accessed 31 July 2020).  |
| Norway                            | Statista. Number of coronavirus (COVID-19) cases in Norway in 2020, by age and gender, <a href="https://www.statista.com/statistics/1103986/number-of-coronavirus-covid-19-cases-in-norway-by-age-groups/">https://www.statista.com/statistics/1103986/number-of-coronavirus-covid-19-cases-in-norway-by-age-groups/</a> (accessed 31 July 2020).  |
| Denmark                           | Statista. Number of coronavirus (COVID-19) cases in Denmark in 2020, by age and gender, <a href="https://www.statista.com/statistics/1103966/number-of-coronavirus-covid-19-cases-in-denmark-by-age-and-gender/">https://www.statista.com/statistics/1103966/number-of-coronavirus-covid-19-cases-in-denmark-by-age-and-gender/</a> (accessed 31 July 2020).                                       |
| Finland                           | Statista. Number of coronavirus (COVID-19) cases in Finland as of July 17, 2020, by age group, <a href="https://www.statista.com/statistics/1103926/number-of-coronavirus-cases-in-finland-by-age-group/">https://www.statista.com/statistics/1103926/number-of-coronavirus-cases-in-finland-by-age-group/</a> (accessed 31 July 2020).  |
| <b>Daily cases</b>                |  |
| Sweden                            | Statista. Number of new coronavirus (COVID-19) cases in Sweden since February 2020, by date of report, <a href="https://www.statista.com/statistics/1102193/coronavirus-cases-development-in-sweden/">https://www.statista.com/statistics/1102193/coronavirus-cases-development-in-sweden/</a> (accessed 31 July 2020).  |
| Norway                            | Statista. Number of new coronavirus (COVID-19) cases in Norway since February 2020, by date of report, <a href="https://www.statista.com/statistics/1102246/coronavirus-cases-development-in-norway/">https://www.statista.com/statistics/1102246/coronavirus-cases-development-in-norway/</a> (accessed 31 July 2020).  |
| Denmark                           | Statista. Number of new coronavirus (COVID-19) cases in Denmark since February 2020, by date of report, <a href="https://www.statista.com/statistics/1102237/coronavirus-cases-development-in-denmark/">https://www.statista.com/statistics/1102237/coronavirus-cases-development-in-denmark/</a> (accessed 31 July 2020).   |
| Finland                           | Statista. Number of new coronavirus (COVID-19) cases in Finland since January 2020, by date of report, <a href="https://www.statista.com/statistics/1102251/coronavirus-cases-development-in-finland/">https://www.statista.com/statistics/1102251/coronavirus-cases-development-in-finland/</a> (accessed 31 July 2020).  |
| <b>Daily tests</b>                |  |
| All countries                     | Our World in Data. Coronavirus (COVID-19) Testing, <a href="https://ourworldindata.org/coronavirus-testing">https://ourworldindata.org/coronavirus-testing</a> (accessed 31 July 2020).  |
| <b>Daily test positivity rate</b> |  |
| Sweden                            | Calculated via Our World in Data daily testing data and Statista daily case data, cited above in this table  |

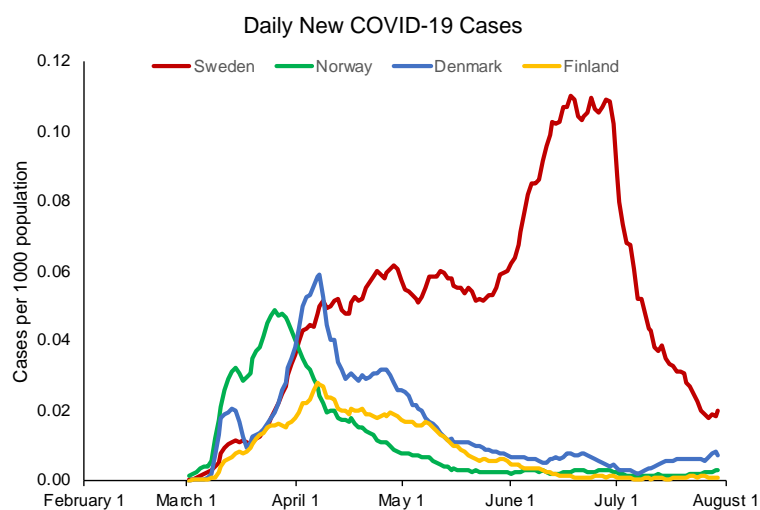
|   |   |
|---|---|
| Norway, Denmark, Finland                      | Our World in Data. The share of COVID-19 tests that are positive, <a href="https://ourworldindata.org/grapher/positive-rate-daily-smoothed?tab=chart&amp;country=~SWE">https://ourworldindata.org/grapher/positive-rate-daily-smoothed?tab=chart&amp;country=~SWE</a> (2020, accessed 31 July 2020).  |
| <b>Population and age-specific population</b> |   |
| Sweden  | Statistics Sweden. Mean population (by year of birth) by region, age and sex. Year 2006 - 2019, <a href="http://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__BE__BE0101__BE0101D/MedelfolkFodelsear/">http://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__BE__BE0101__BE0101D/MedelfolkFodelsear/</a> (accessed 19 July 2020).  |
| Norway  | Statistics Norway. Population, by sex and one-year age groups (M) 1986 - 2020. Statbank Norway, <a href="https://www.ssb.no/en/statbank/table/07459/">https://www.ssb.no/en/statbank/table/07459/</a> (accessed 19 July 2020).  |
| Denmark                                       | Statistics Denmark. Population figures from the censuses, <a href="https://www.statbank.dk/statbank5a/default.asp?w=1280">https://www.statbank.dk/statbank5a/default.asp?w=1280</a> (accessed 19 July 2020).  |
| Finland                                       | Statistics Finland. Population and population by age group, <a href="https://www.stat.fi/tup/suoluk/suoluk_vaesto_en.html#Population and population projection by age group">https://www.stat.fi/tup/suoluk/suoluk_vaesto_en.html#Population and population projection by age group</a> (accessed 19 July 2020).  |
| <b>Changes in government policy</b>           |   |
| All countries                                 | Hale T, Webster S, Petherick A, et al. Coronavirus Government Response Tracker, <a href="https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker">https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker</a> (2020, accessed 31 July 2020)   |
| <b>Public holidays</b>                        |   |
| All countries                                 | Nordea Bank. Nordea Bank Holidays, <a href="https://www.nordea.com/en/about-nordea/contact/bank-holidays/">https://www.nordea.com/en/about-nordea/contact/bank-holidays/</a> (accessed 14 July 2020).   |
| <b>Seniors care deaths</b>                    |   |
| Sweden  | Socialstyrelsen. Statistics on the number of deaths in covid-19, <a href="https://www.socialstyrelsen.se/statistik-och-data/statistik/statistik-om-covid-19/statistik-over-antal-avlidna-i-covid-19/">https://www.socialstyrelsen.se/statistik-och-data/statistik/statistik-om-covid-19/statistik-over-antal-avlidna-i-covid-19/</a> (2020, accessed 31 July 2020).   |
| Norway  | Folkehelseinstituttet. Covid-19 Ukesrapport-uke 30. (2020, accessed 31 July 2020).  |
| Denmark                                       | Statens Serum Institut. Overvågning af COVID-19, <a href="https://www.ssi.dk/sygdomme-beredskab-og-forskning/sygdomsovervaagning/c/covid19-overvaagning">https://www.ssi.dk/sygdomme-beredskab-og-forskning/sygdomsovervaagning/c/covid19-overvaagning</a> (2020, accessed 31 July 2020).   |
| Finland                                       | Forma L, Aaltonen M, Pulkki J. COVID-19 and clients of long-term care in Finland-impact and measures to control the virus, <a href="https://ltccovid.org/wp-content/uploads/2020/06/ltccovid-country-reports_Finland_120620.pdf">https://ltccovid.org/wp-content/uploads/2020/06/ltccovid-country-reports_Finland_120620.pdf</a> (12 June 2020, accessed 31 July 2020).   |
| <b>Urbanization (%)</b>                       |   |
| All countries                                 | World Bank. Urban population (% of total population) - Norway, Sweden, Denmark, Finland, <a href="https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?end=2019&amp;locations=NO-SE-DK-FI&amp;start=2019&amp;view=bar">https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?end=2019&amp;locations=NO-SE-DK-FI&amp;start=2019&amp;view=bar</a> (2018, accessed 7 October 2020)  |
| <b>Population density</b>                     |   |
| All countries                                 | World Bank. Population density (people per sq. km of land area)- Norway, Sweden, Denmark, Finland, <a href="https://data.worldbank.org/indicator/EN.POP.DNST?locations=NO-SE-DK-FI">https://data.worldbank.org/indicator/EN.POP.DNST?locations=NO-SE-DK-FI</a> (2018, accessed 7 October 2020)  |
| <b>Capital city populations</b>               |   |
| Sweden  | Statistics Sweden. 50 largest municipalities, by population, <a href="https://www.scb.se/en/finding-statistics/statistics-by-subject-area/population/population-composition/population-statistics/pong/tables-and-graphs/rank-lists-municipalities/swedens-50-largest-municipalities-2019/">https://www.scb.se/en/finding-statistics/statistics-by-subject-area/population/population-composition/population-statistics/pong/tables-and-graphs/rank-lists-municipalities/swedens-50-largest-municipalities-2019/</a> (2019, accessed 12 October 2020) |
| Norway  | Statistics Norway. Population. Statbank Norway, <a href="https://www.ssb.no/en/befolkning">https://www.ssb.no/en/befolkning</a> , (accessed 12 October 2020)  |
| Denmark                                       | Statistics Denmark. Population 1 January by municipality and time, <a href="https://www.statbank.dk/BY2">https://www.statbank.dk/BY2</a> , (2020, accessed 12 October 2020)   |
| Finland                                       | Statistics Finland. Population by municipality-based units, <a href="https://www.stat.fi/org/avoindata/paikkatietoaineistot/vaesto_tilastointialueittain_en.html">https://www.stat.fi/org/avoindata/paikkatietoaineistot/vaesto_tilastointialueittain_en.html</a> (2020, accessed 12 October 2020)  |
| <b>Capital city land areas</b>                |   |
| Sweden  | Statistics Sweden. Land and water area 1 January by region and type of area (no update after 2011). Year 2000 – 2011, <a href="https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__MI__MI0802/Areal/">https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__MI__MI0802/Areal/</a> (2020, accessed 12 October 2020)  |
| Norway  | Statistics Norway. Population and land area in urban settlements, <a href="https://www.ssb.no/en/befolkning">https://www.ssb.no/en/befolkning</a> (2020, accessed 12 October 2020)  |
| Denmark                                       | New World Encyclopedia. Copenhagen. <a href="https://www.newworldencyclopedia.org/entry/copenhagen">https://www.newworldencyclopedia.org/entry/copenhagen</a> (2017, accessed 12 October 2020)  |
| Finland                                       | Statistics Finland. NLS National Land Survey of Finland - Official Municipality Land Area for 2014, <a href="https://www.maanmittauslaitos.fi/sites/maanmittauslaitos.fi/files/old/alat_2014.pdf">https://www.maanmittauslaitos.fi/sites/maanmittauslaitos.fi/files/old/alat_2014.pdf</a> (2014, accessed 12 October 2020)  |

**Supplementary Figure 1:** Graphical representation of strictness of Nordic countries' eight containment and closure measures by date. Data is included until July 31 and is from the Oxford Coronavirus Government Response Tracker.

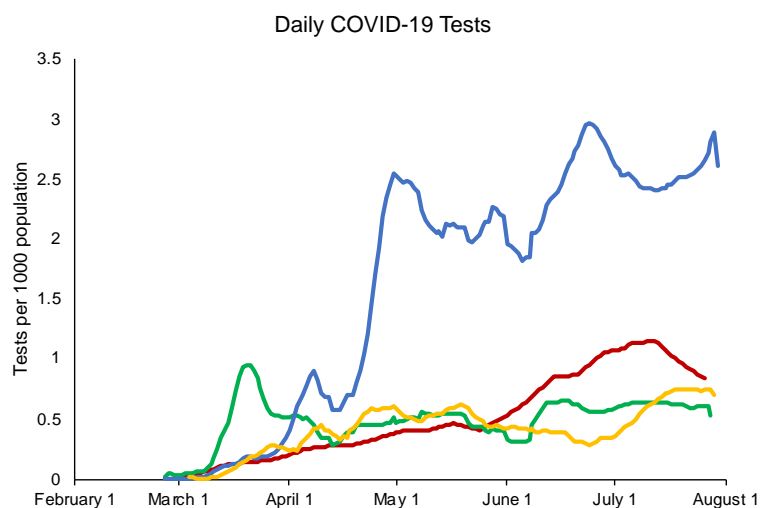


**Supplementary Figure 2:** A. Daily new COVID-19 cases per 1000 population. B. Daily COVID-19 tests per 1000 population. C. Daily share of COVID-19 tests that are positive. All lines represent a seven day moving average. Data is included until July 31.

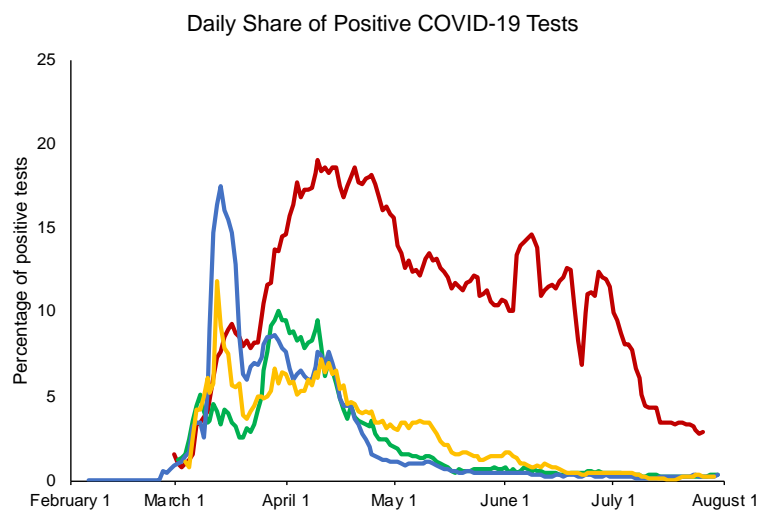
A.



B.



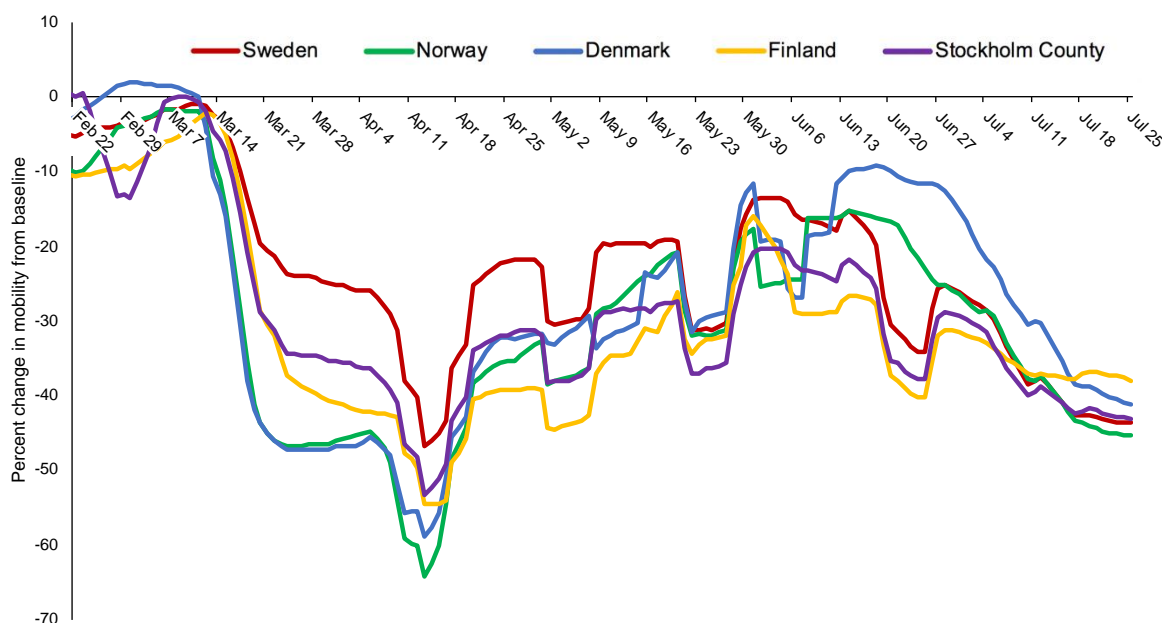
C.



**Supplementary Figure 3:** A. Workplace mobility, percent change from baseline. B. Transit stations mobility, percent change from baseline. C. Parks mobility, percent change from baseline. D. Grocery and pharmacy mobility, percent change from baseline. All lines represent a seven day moving average. Baseline values are region-specific and are established using a median of the corresponding day of the week from the period between January 3 to February 6, 2020. Note: Public holidays occurred for all four countries on April 10, April 13, and May 21; on May 1 for Norway/Sweden/Finland; on June 19 for Sweden/Finland; on April 9 and June 1 for Norway/Denmark; and May 8, May 22, and June 5 for Denmark. Data is included until July 31 and is from the Google Community Mobility Report.

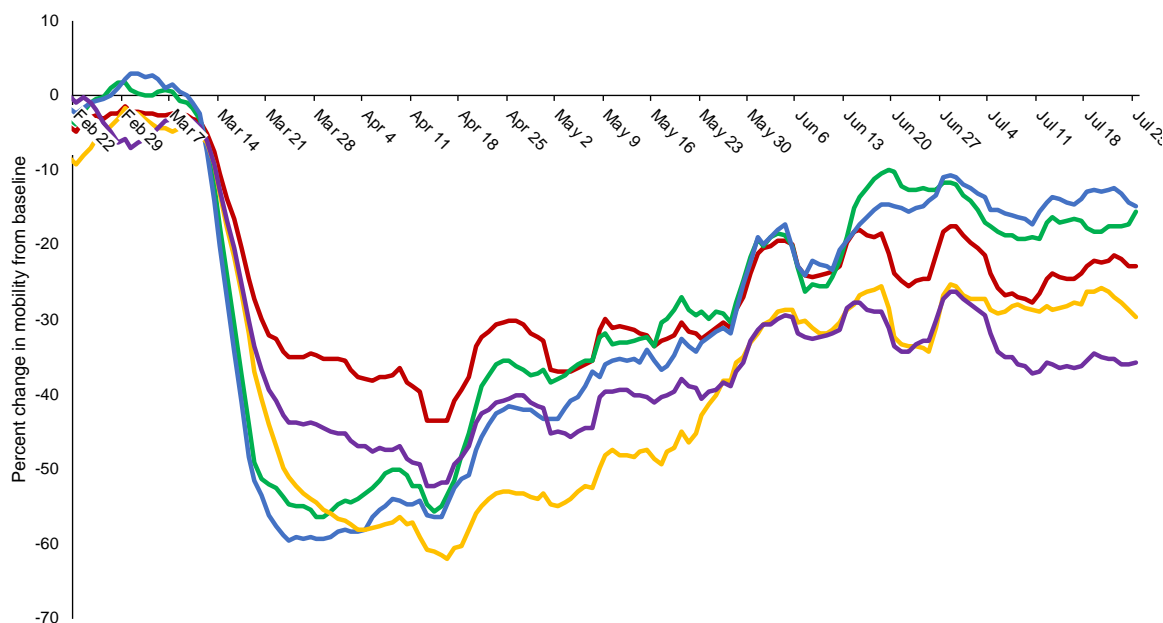
A

Workplaces Percent Change From Baseline Mobility

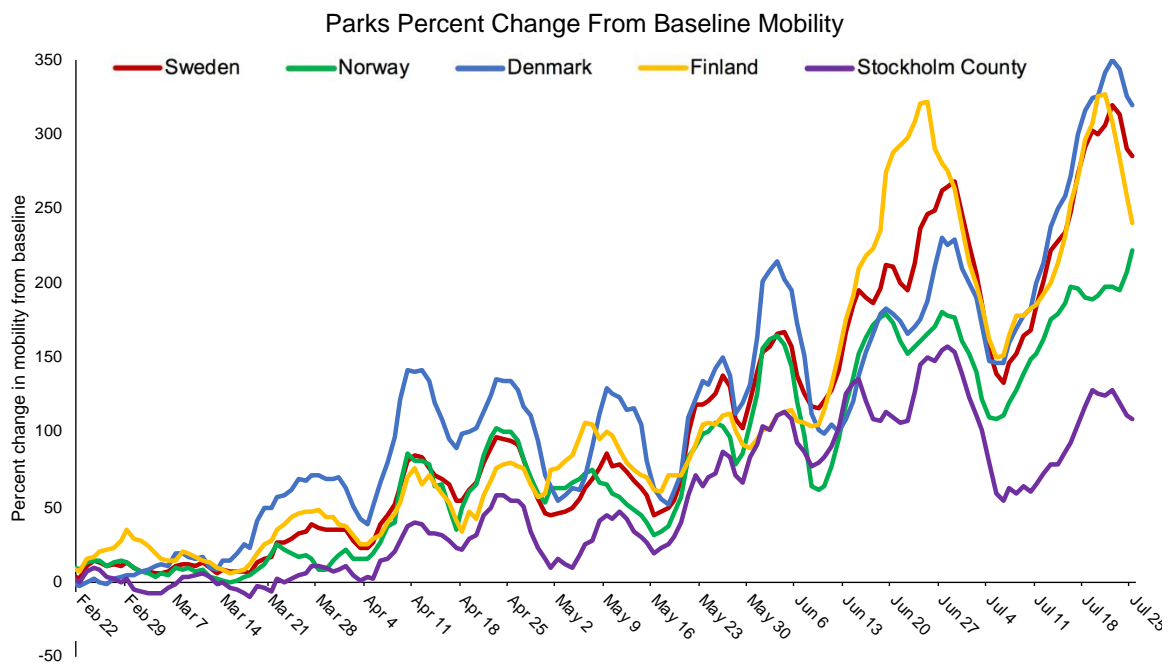


B

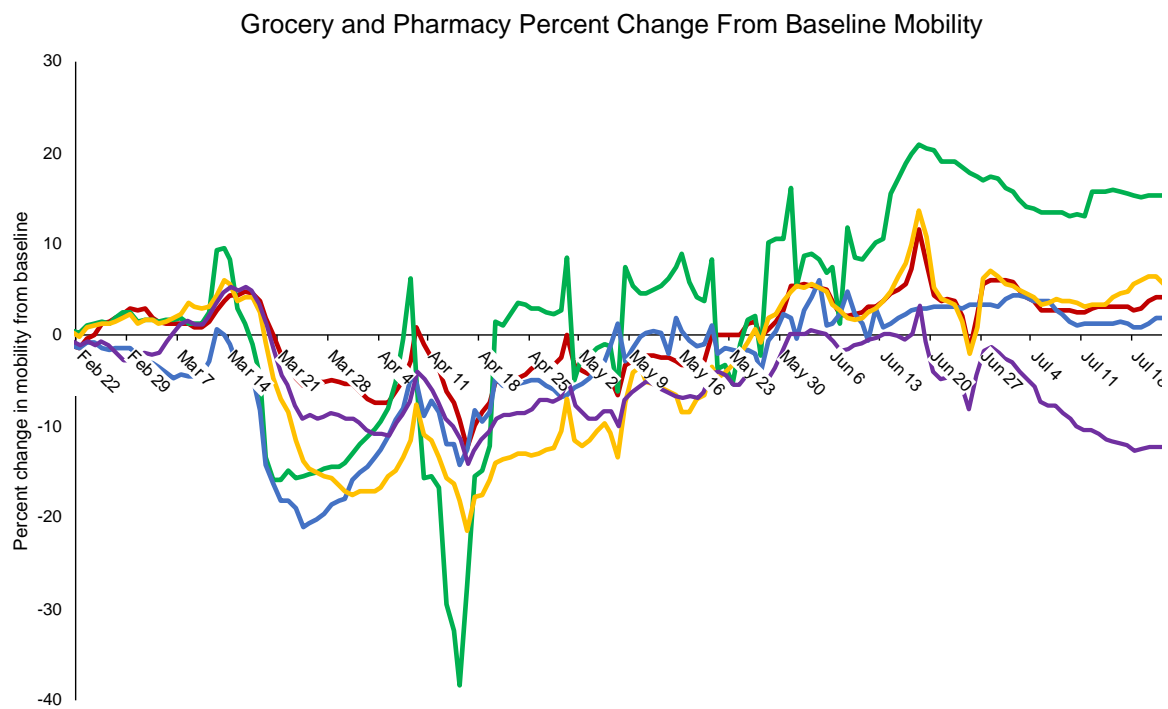
Transit Stations Percent Change From Baseline Mobility



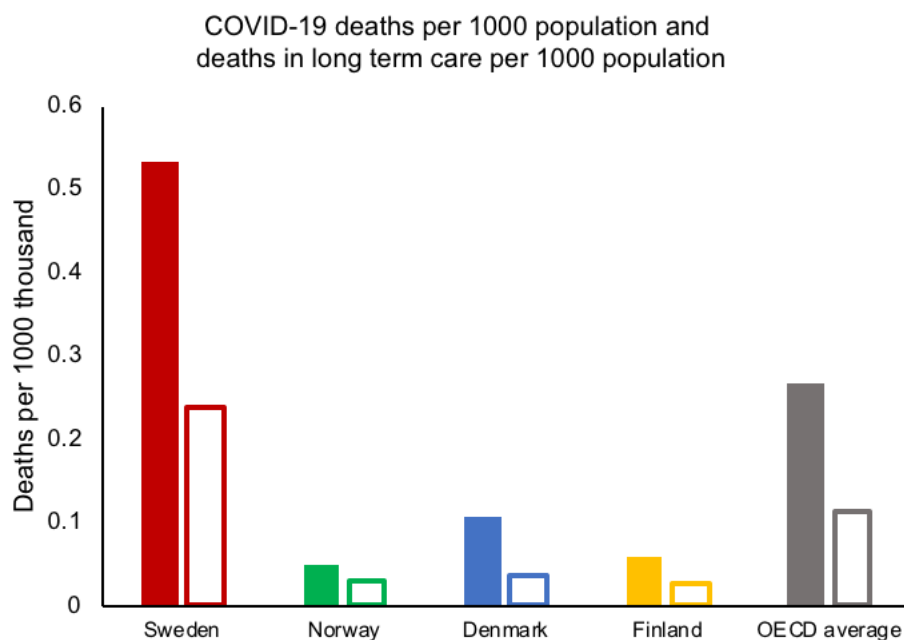
C



D



**Supplementary Figure 4:** Cumulative COVID-19 deaths per 1000 population and cumulative deaths in long term care per 1000 population in Sweden, Norway, Denmark, and Finland compared to OECD average. Data from Nordic countries is from the week of July 15; OECD average data is from a report from the Canadian Institute for Health Information published on May 25. Solid bars represent deaths per 1000 population, and open bars represent deaths in long term care per 1000 population.



**Supplementary Figure 5:** Population, population density, urbanization, population in capital city, and population density in capital city of Sweden, Norway, Denmark, and Finland.

|  | <b>Sweden</b> | <b>Norway</b> | <b>Denmark</b> | <b>Finland</b> |
|--|---------------|---------------|----------------|----------------|
| Population (2020)  | 10,345,449    | 5,367,580     | 5,824,857      | 5,528,737      |
| Population density (people/km <sup>2</sup> )                 | 25.4          | 14.7          | 138.7          | 18.2           |
| Urbanization (%)   | 87.1          | 82.6          | 88.0           | 85.5           |
| Population in capital city (%)                               | 9%            | 13%           | 11%            | 12%            |
| Population density in capital city (people/km <sup>2</sup> ) | 5189          | 5244          | 7165           | 3059           |